

**OPTIPEP 80 DH 11 AGGLOMERATED** **TECHNICAL SPECIFICATION**

**Product Description** Optipep 80 DH 11 Agglomerated is an enzyme hydrolysed Whey Protein Concentrate, with increased particle size, providing a high quality source of peptides. It is lightly hydrolysed offering a low bitter flavour profile and is suitable for use in enhanced nutritional and functional applications.

**Ingredient Listing** Hydrolysed Whey Protein Concentrate

Chemical	Specification	Typical	Test Method
Protein (TN x 6.47*) (% dry basis)	79.0 Min	80.0	Kjeldahl
Total Nitrogen (% TN)	11.5 Min	11.8	Kjeldahl
Moisture (%)	6.0 Max	5.0	Oven
Fat (%)	10.0 Max	8.0	NIR
Ash (%)	8.0 Max	6.0	Furnace 550°C
Lactose (%)	10.0 Max	5.0	Calculated
pH	6.0 Min	6.3	10% Aq Soln

\* Kjeldahl Factor adjusted for changes in Nitrogen : Protein ratio due to the degree of hydrolysis

**Microbiological**

Standard Plate Count (SPC)	50,000 / g Max	<10,000 / g Max	ISO 4833:2003
Coliforms	<10 / g	<10 / g	IDF73B:1998
E.coli	<10 / g	<10 / g	US-EPA approved method Federal Register / Vol. 67, No. 209. Journal of Food Protection 51:402-404
Staph. aureus	<10 / g	<10 / g	IDF145A:1997
Salmonella	Neg / 25.0g	Neg / 25.0g	ISO6579:2002
Yeast & Moulds	50 / g Max	<10 / g	ISO 6611:2004

**Physical**

Scorched Particles	Disc B or better	Disc A	ADPI Bulletin 916
Bulk Density	0.40 ± 0.10 g/cc	0.40	IDF134:1996
Appearance		Homogenous, free-flowing powder	Visual
Colour		Creamy white	Visual
Organoleptic		Typical, free from off-flavour	Taste

**Mineral Profile**

Calcium (mg/100g)	300 - 450	450	Atomic Spectroscopy
Sodium (mg/100g)	100 - 200	120	Atomic Spectroscopy
Potassium (mg/100g)	150 - 350	250	Atomic Spectroscopy
Magnesium (mg/100g)	40 - 100	50	Atomic Spectroscopy
Phosphorous (mg/100g)	250 - 450	350	Atomic Spectroscopy
Chloride (mg/100g)	<50	<50	Titration

**Hydrolysis Characteristics**

Degree of Hydrolysis (%)	11.0 ± 2	11.0	TNBS Assay	
AN/TN (%)	12.0 - 16.0	14.0	Calculated	
Molecular Weight Profile	>10,000	Daltons (%)	22	Size Excl. Chromatography
	5,000 - 10,000	Daltons (%)	8	Size Excl. Chromatography
	2,000 - 5,000	Daltons (%)	12	Size Excl. Chromatography
	1,000 - 2,000	Daltons (%)	11	Size Excl. Chromatography
	500 - 1,000	Daltons (%)	18	Size Excl. Chromatography
	<500	Daltons (%)	29	Size Excl. Chromatography
Average Molecular Weight		Daltons	5,837	Calculation

**Typical Nutritional Information**

Amino Acid Profile	(g per 100g Powder)	(g per 100g Protein)
Leucine	9.35	11.54
Isoleucine	5.03	6.22
Valine	5.09	6.28
<i>Total Branched Chain Amino Acids</i>	<i>19.47</i>	<i>24.04</i>
Aspartic Acid	9.51	11.73
Glutamic Acid	15.22	18.78
Serine	4.72	5.83
Glycine	1.66	2.05
Histidine	1.61	1.99
Arginine	2.39	2.95
Threonine	6.44	7.95
Alanine	4.26	5.26
Proline	5.04	6.22
Tyrosine	2.70	3.33
Methionine	1.61	1.99
Cystine	2.13	2.63
Phenylalanine	2.85	3.53
Lysine	8.10	9.86
Tryptophan	1.24	1.54

**Protein Utilisation\***

PER	3.5
BV	104
PDCAAS	0.96

\* As per scientific literature

**Fatty Acid Profile**

Saturates (%)	5.87
Mono-unsaturates (%)	2.13
Polysaturates (%)	<0.10
Cholesterol (mg/100g)	160

**Carbohydrates**

Lactose (%)	5.00
Glucose (%)	<0.10
Sucrose (%)	<0.10

Energy	410 Kcal / 1730 KJ
Fibre	Nil

**Diet Suitability**

This product is suitable for individuals with the following dietary requirements: Kosher, Halal, Vegetarian, Ovo-Lacto Vegetarian, Coeliacs, Diabetics, GMO Free, Nut/Seed free.

**Storage**

Store under clean, cool, dry conditions not exposed to direct sunlight or strong odours and avoiding direct contact with walls and floors. Recommended shelf life is 24 months.

**Packaging**

Packed in 20 kg multi-wall paper-sacks with polythene liners. Each sack will be heat sealed. The product will be palletised and shrink wrapped.

**Labelling**

The following will be printed in large blue writing on white sacks. "Optipep 80 DH11 AGG", Manufactured by Carbery Food Ingredients and processor EU number.

**Coding**

Each sack will be individually coded by an automatic ink jet system to ensure traceability.